

REMARKS

The typographical error in claim 22 has been addressed such that the correct term “body” is shown in place of the term “base”, the term “body” having proper antecedent basis in claim 14.

Claims 1, 14 and 27 have now been amended, such that the projectile nose of the invention as now claimed requires the presence of a cavity. This amendment is tendered in view of Figure 2 of the Royer ‘821 reference, which discloses a solid projectile nose composed of a rigid foam polymer partially surrounded by a flexible cover.

It is respectfully argued that the claims as now presented, including the original claims not amended herein, are patentable in view of the known prior art.

Luxton ‘183 teaches a nonlethal projectile having a frangible cap portion or nose, where the frangibility occurs along axially oriented score lines. Claim 1 of the application at hand requires a “projectile nose composed of a frangible, rigid, polymer foam material” (emphasis added). Contrary to the statement of the Examiner (page 2, line 3) contained in the office action discussing claim 1 of the application, Luxton does not teach a “nose comprised of a ... rigid polymer”. It is important to note that the Luxton device is described as having a “soft cap portion” (abstract) and that “the cap is formed of relatively pliable, resilient material” (col. 2, lines 65-66). In one embodiment, the cap is able to be “stretched fit” (col. 3, lines 19-20). A soft, pliable, resilient, stretchable material is not a rigid material. It is clear that the Luxton projectile will suffer some of the inadequacies discussed in the background section of the specification at hand, in that the accuracy and velocity of the projectile, along with other characteristics, will be detrimentally affected by the “soft”, “resilient”, “pliable” nature of the

material of composition utilized in the nose or cap portion. The Luxton projectile is an example of the type of device that this invention improves upon.

Furthermore, the addition of the teachings of Royer '821 does not preclude patentability of claim 1 as now presented. As indicated by the Examiner, claim 1 requires the nose to be composed of a "polymer foam material", and Luxton does not teach the use of a polymer foam material. While Royer does teach the use of a projectile nose composed of a rigid polymer foam material (shown encased in a flexible non-foam covering in Figure 1 or exposed in Figure 2), claim 1 as amended now requires the projectile nose to comprise a cavity. Combination of the Royer teachings with those of Luxton would not result in a device as now claimed. Since Luxton shows a projectile nose/cap composed of a soft, resilient, pliable material, the combination of Luxton and Royer would not result in anything different from the device shown in Figure 1 of Royer, i.e., a projectile nose having a solid internal rigid foam core surrounded by a flexible, non-foam outer shell, except that Luxton would teach to provide score lines in the outer shell material of the projectile shown in Figure 1 of Royer. There is no motivation, teaching or suggestion to cause one to substitute the rigid foam of Royer for the soft, resilient, pliable outer layer of Luxton to create a rigid projectile nose with a cavity, especially since the alternative embodiment in Royer (Figure 2) teaches removal of the flexible outer shell to expose a solid rigid foam nose. There is no contemplation in Royer of a cavity.

In addition, the Royer reference expressly teaches the non-desirability of a projectile having a nose formed of a rigid, crushable foam that is not encased in a non-foam, flexible cover. Royer states that providing a projectile with a "completely unshielded or exposed crushable material nose ... exhibits some unacceptable properties" and states that only by utilizing a full or partial cover composed of a non-foam, flexible material will the projectile perform satisfactorily

(col. 1, line 51 to col. 2, line 18). Thus, it is further submitted that attempting to combine Royer with Luxton to make obvious a projectile of the form as claimed in the application is precluded by the negative teaching of Royer's own disclosure.

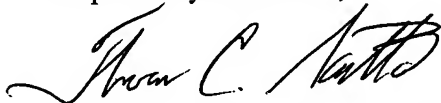
Claims 2, 3 and 5-13 are dependent on claim 1, and it is therefore submitted that these claims are allowable in view of the allowability of claim 1 as amended.

Claim 14 has now been amended to require the presence of a cavity in a projectile nose formed of a rigid, polymer foam. As asserted above, the combination of Luxton and Royer does not make such a structure obvious, as there is no teaching, motivation or suggestion for replacement of the soft, resilient, pliable, non-foam nose material of the Luxton device with a rigid foam composition - there is only the motivation or suggestion to fill the internal cavity of Luxton with a solid foam body as shown in Figure 1 of Royer. Claim 14 and dependent claims 15, 16 and 18-26 should be allowed in view of the prior art.

Claim 27 has likewise been amended to require the presence of a cavity. For the same reasons set forth above, claim 27 and dependent claims 28-31 should be allowed.

It is respectfully submitted that the claims as amended are patentable, on the basis of the above remarks, and reconsideration and subsequent passage for allowance is hereby requested.

Respectfully submitted,



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